Abstract of the Disclosure

An efficient photovoltaic cell, and its process of manufacture, is disclosed wherein the back surface p-n junction is removed from a doped substrate having an oppositely doped emitter layer. A front surface and edges and optionally the back surface periphery are masked and a back surface etch is performed. The mask is not removed and acts as an anti-reflective coating, a passivating agent, or both. The photovoltaic cell retains an untextured back surface whether or not the front is textured and the dopant layer on the back surface is removed to enhance the cell efficiency. Optionally, a back surface field is formed.